DE-SC04-02AL68123

Department of Energy
Albuquerque Operations Office
P. O. Box 5400
Albuquerque, New Mexico 87185-5400

July 12, 2002

SOLICITATION FOR FINANCIAL ASSISTANCE APPLICATIONS (SFAA) NO. DE-SC04-02AL68123 RESEARCH AND DEVELOPMENT FOR TRUCK ESSENTIAL POWER SYTEMS FOR INCREASED POWERTRAIN FUEL EFFICIENCY AND OVERALL SYSTEMS EFFICIENCY IMPROVEMENTS

ISSUED BY

U. S. DEPARTMENT OF ENERGY
ALBUQUERQUE OPERATIONS OFFICE
CONTRACTS & PROCUREMENT DIVISION
P. O. BOX 5400

ALBUQUERQUE, NEW MEXICO 87185-5400

SOLICITATION DE-SC04-02AL68123
Office of Heavy Vehicle Technologies

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AGENCY: U.S. Department of Energy, Albuquerque Operations Office

ACTION: Solicitation for Financial Assistance: DE-SC04-02AL68123, Research and Development for Truck Essential Power Systems for Increased Powertrain Fuel Efficiency and Overall Systems Efficiency Improvements.

STATUTORY AUTHORITY: The statutory authority for this program is the Energy Policy Act of 1992 (Public Law 102-486, as amended by Public Law 103-437) and the U. S. Department of Energy Organization Act (Public Law 95-91).

SUMMARY: The U.S. Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy, Office of Heavy Vehicle Technologies (OHVT), is seeking applications for cost-shared research and development for truck Essential Power Systems (EPS). Trucks include Class 2b through Class 8. The Essential Power System is a cross-cutting technology area (technologies and systems) that seeks to provide more efficient, practical, and cost effective management of electrical, mechanical, and thermal power on trucks. The EPS provides a possible technology pathway for future truck electrification. Examples of technologies appropriate to this solicitation are described in the Background section, below. Applications are sought under two topic areas:

Topic 1-Truck Essential Power Systems Powertrain Fuel Efficiency Improvements

Topic 2- Essential Power Systems Truck Systems Efficiency Improvements

To be considered for both topics, applications must be submitted separately for each topic. Federal funds in the amount of $2,500,000 to $5,000,000 are expected to be available for this program over a four-year period. DOE anticipates making approximately 1-3 cooperative agreement awards having an initial Phase I of approximately two years, although longer periods of time are possible. A Phase II may follow for promising technologies or systems. Shorter-term innovative concepts will also be considered. A

minimum of 50% non-federal cost share is required.

Teaming arrangements are strongly encouraged, especially among truck original equipment manufacturers (OEM's) and manufacturers of powertrain/engine and truck systems, to take advantage of the best complementary technologies available from the different companies/organizations. Participation of universities, small businesses, state and local governments, Indian tribes, and DOE Laboratories is also encouraged. It is desired by DOE that the primary applicant be an industrial partner. This promotes timely technology transfer to the private sector and enhances U.S. industrial competitiveness.

CFDA NUMBER: The Catalog of Federal Domestic Assistance (CFDA) Number for this program is 81.086.

ADDRESS: Applications shall be mailed or hand-carried to the following address no later than the published closing time for each:

Mail To:
U.S. Department of Energy
Albuquerque Operations Office
Office of Contracts and Procurement
ATTN: Evan M. Dunne
PO Box 5400
Albuquerque, NM 87185-5400

Hand Carried/Federal Express:
U.S. Department of Energy
Albuquerque Operations Office
Office of Contracts and Procurement
Pennsylvania and H Streets
Kirtland AFB, Building 20388
Albuquerque, NM 87116
Attn: Evan M. Dunne

FOR FURTHER INFORMATION CONTACT: Evan M. Dunne, Contract Specialist, Telephone (505) 845-4798, Facsimile (505) 845-5181, e-mail edunne@doeal.gov

SUPPLEMENTARY INFORMATION:

A. BACKGROUND - OHVT has ongoing projects in diesel engine research, exhaust after-treatment, heavy vehicle systems research (e.g., aerodynamic drag, friction and wear, thermal management), and materials. OHVT also has an ongoing industry cooperative program to develop heavy hybrid vehicles, and is initiating both railroad and off-highway fiscal year 2002 research and development programs for efficiency improvements and emissions reductions. These programs were established after workshops were held involving national laboratories, industry representatives, and universities.

The EPS program is being initiated following a December 2001 workshop. The workshop provided information on potentially promising technologies and truck systems which could, if successfully developed and subsequently commercialized, provide the basis for truck energy, environmental, and operational efficiency improvements—and a transition pathway

to a more-electric truck.

In establishing the EPS program, OHVT originally conceived of a program focused on auxiliary power systems as an approach to transitioning truck loads and accessories from mechanical to electrical power. In developing this program approach it became apparent that the marketplace is moving in the direction of increased truck electrification as a means to improve energy and operational efficiency. As a result, OHVT expanded the scope of the program to include both powertrain and systems efficiency improvements to further the transition to more-electric trucks. The program is envisioned as encompassing a variety of technologies, systems, and evaluation protocols, such as:

- Overall truck power system evaluation and optimization, and development of sub system specifications.
- Low cost and light weight power electronics to control voltage and frequency and manage system power.
- Innovative approaches to reducing truck fuel consumption by idling reduction technologies, systems and operational regimes.
- Advanced energy conversion technologies and systems for auxiliary power and energy/power management. Examples include technologies such as: fuel cells, thermoelectric energy conversion, and diesel engine driven auxiliary power units.
- Advanced materials for powertrains and truck systems.
- Advanced computer modeling for powertrain and vehicle systems design optimization and evaluation.
- Advanced low cost and environmentally friendly diesel generator sets which exhibit low noise, high efficiency, low maintenance, and high reliability.
- Advanced thermal and fluid management systems.
- Advanced electrical power management of truck energy systems.
- Both near-and-long term technologies to advance the transition from belt-and gear-driven accessories to electrically-driven accessories.

The technical objectives for the EPS program are to develop and demonstrate by 2010 a range of auxiliary power-truck electrification technologies and systems, which in commercial practice will:

- Reduce by 50% the auxiliary truck power requirement
- Provide for the full transition from current practice belt-and-gear-driven power to electric auxiliary power
- Significantly reduce truck emissions in idling and motive operations, and
- Provide the technology pathway for future truck electrification.

Applications must be submitted separately for each of the following two topics:

Topic 1: Truck Essential Power Systems Powertrain Fuel Efficiency Improvements.

Topic 2: Essential Power Systems Truck Systems Efficiency Improvements.

Any proposed work should complement existing OHVT and other government agency programs. Information on Office of Heavy Vehicle Technologies programs may be found at http://www.trucks.doe.gov/. Results and recommendations of the December 12-13, 2001 Essential Power Systems workshop should be considered. Preliminary workshop results may be found at http://www.trucks.doe.gov/publications/2001_EPS_Workshop.html. These results will be periodically updated following review by industry and National Laboratory representatives.

B. PROJECT DESCRIPTION – The Essential Power Systems program is defined by two topics—Topic I and Topic II-- with each topic defining a Phase I, and a potential Phase II. Each phase has associated tasks. These topics, phases, and tasks are described below.

Topic I: Truck Essential Power Systems Powertrain Fuel Efficiency Improvements

This topic includes technologies and systems which could be integrated with the truck powertrain. An example would be the incorporation of a small, self-contained 5-10 kW solid oxide fuel cell providing DC/AC electrical power to directly operate the truck heating-ventilating-air conditioning (HVAC) system, thus relieving the engine from providing this power.

Phase I – This phase will consist of technology feasibility research and development and exploration of alternative technology options. It is anticipated that Phase I will typically be of two years duration. At the completion of Phase I the awardee shall demonstrate the technical feasibility and potential marketplace viability of a truck powertrain/engine Essential Power System. The following tasks shall be accomplished:

Task 1. The awardee shall provide a detailed written Implementation Plan for the execution of Phase I. Proposed technical and management approaches shall be identified for goal achievement. The plan shall identify the proposed tasks and responsibilities of all team members.

Task 2. The awardee shall conduct an oral briefing to DOE on the Implementation Plan within 30 days after cooperative agreement award.

Task 3. Following DOE approval of the Implementation Plan, the awardee shall lead and conduct a development effort on enabling technology to meet the requirements of the Phase I goals.

Task 4. At the completion of Phase I, the awardee shall prepare a report of Phase I results and provide an in-depth oral briefing to DOE on the technical merits and marketplace potential of the technology. A proposed Phase II implementation plan will also be provided to DOE. On the basis of the review, DOE will decide whether to initiate Phase II or terminate the program.

Phase II – Phase II will consist of technology optimization, demonstration, and preparation for commercialization. The following tasks shall be accomplished:

Task 1. The awardee shall provide a detailed Implementation plan for the execution of Phase II. Proposed technical and management approaches shall be identified for goal achievement.

Task 2. The awardee shall conduct an oral briefing to DOE on the Implementation Plan within 30 days after initiation of Phase II.

Task 3. Following DOE approval of the Implementation Plan, the awardee shall continue development of mutually agreed upon research and development efforts to meet the requirements of the Phase II goals.

Task 4. At the completion of Phase II, the awardee shall prepare a report of Phase II results and provide an in-depth oral briefing to DOE on the technical merits and marketplace potential of the technology.

Topic 2: Essential Power Systems Truck Systems Efficiency Improvements

This phase includes technologies and systems which could improve the operational efficiency of the truck. Although the envisioned truck systems may not be integrated directly with the powertrain or engine, it is envisioned that technologies such as advanced truck aerodynamics, computer modeling, advanced thermal and fluid management systems, and new materials could significantly improve the energy and operational efficiency of trucks, thereby reducing powertrain mechanical and electrical requirements.

Phase I – This phase will consist of technology feasibility research and development and exploration of alternative technology options. It is anticipated that Phase I will typically be of two years duration. At the completion of Phase I the awardee shall demonstrate the technical feasibility and potential marketplace viability of a truck systems Essential Power System. It is anticipated that this topic may utilize promising truck energy systems technology options currently being investigated by the Office of Heavy Vehicle Technologies. The following tasks shall be accomplished:

Task 1. The awardee shall provide a detailed written Implementation Plan for the execution of Phase I. Proposed technical and management approaches shall be identified for goal achievement. The plan shall identify the proposed tasks and responsibilities of all team members.

Task 2. The awardee shall conduct an oral briefing to DOE on the Implementation Plan within 30 days after cooperative agreement award.

Task 3. Following DOE approval of the Implementation Plan, the awardee shall lead and conduct a development effort on enabling technology to meet the requirements of the Phase I goals.

Task 4. At the completion of Phase I, the awardee shall prepare a report of Phase I results and provide an in-depth oral briefing to DOE on the technical merits and marketplace potential of the technology. A proposed Phase II implementation plan will also be provided to DOE. On the basis of the review, DOE will decide whether to initiate Phase II or terminate the program.

Phase II – Phase II will consist of technology optimization, demonstration, and preparation for commercialization. The following tasks shall be accomplished:

Task 1**.** The awardee shall provide a detailed Implementation plan for the execution of Phase II. Proposed technical and management approaches shall be identified for goal achievement.

Task 2. The awardee shall conduct an oral briefing to DOE on the Implementation Plan within 30 days after initiation of Phase II.

Task 3. Following DOE approval of the Implementation Plan, the awardee shall continue development of mutually agreed upon research and development efforts to meet the requirements of the Phase II goals.

Task 4. At the completion of Phase II, the awardee shall prepare a report of Phase II results and provide an in-depth oral briefing to DOE on the technical merits and marketplace potential of the technology.

C. PROJECT REVIEW/REPORTING REQUIREMENTS - The project reporting requirements apply to Topic I and Topic II. The Applicant shall clearly identify all proprietary information in their reporting.

The Cooperative Agreement Report Requirements Checklist requires submittal of quarterly financial and technical reports. In addition to these required reports, the awardee shall

provide:

Monthly Status Update Report – A monthly email report shall be provided to the DOE program manager on status, accomplishments, and issues.

Final Technical Review Meeting – An oral briefing report on the final Phase I and Phase II results.

Final Report - A final report for the results for Phase I and Phase II.

D. COST SHARING - A minimum of 50 percent non-federal cost sharing is required.

E. APPLICATION INSTRUCTIONS - The application will be considered representative of the applicant's ability to clearly present defensible research and technology development results to the scientific and truck technology communities. The application shall discuss how the proposed research meets the needs of the U.S. truck industry. There is no limitation on the number of different applications an applicant may submit. All pages of each part shall be appropriately numbered, and identified with the name of the applicant, the date, and the solicitation number to the extent practicable.
The overall application shall consist of four (4) volumes, entitled as stated below. Each volume must be submitted as a separate document. The volumes may contain multiple documents, however, each document must clearly identify the volume to which it is responsive.

All applicants are required to send one fully executed original and two complete copies of the application to the individual indicated in the ADDRESS section of this solicitation.

Application Volume	Title
Volume I	Applicant Certifications and Other Documents
Volume II	Technical
Volume III	Cost/Price
Volume IV	Business Management

Each volume, designated above, is to be submitted individually. Required external markings and the designated place for the one fully executed original are indicated in the provision entitled "Time, Date, and Place Applications are Due."

The information to be included in each volume of the application is as follows:

Volume I Applicant Certifications and Other Documents

This volume shall include any pre-award assurances required pursuant to 10 CFR 600, as follows:

1. Applicant for Federal Financial Assistance, Standard Form SF-424. The SF-424 serves as the application face page. This form shall be completely filled out and signed by an official who is authorized to act for the applicant organization and to commit the applicant to comply with the terms and conditions of the award. A signed SF-424B, Assurances, must accompany the SF-424. *

2. Assurance of Compliance, Form DOE F 1600.5, Nondiscrimination in Federally Assisted Programs. Required of all applicants. *

3. Certification Regarding Lobbying; Debarment, Suspension, and Other Responsibility Matters; and Drug-Free Workplace Requirements. *

4. Disclosure of Lobbying Activities. Required of all applicants. If not applicable, please so indicate. *

5. Certification Regarding a Small Business Firm or Nonprofit Organization. The policies and procedures at 10 CFR Part 600 require any small firm or nonprofit organization to state in writing on company letterhead that it qualifies as a small business firm or nonprofit organization.

6. Simpson-Craig Amendment Representation. Required of all applicants. *

7. Energy Policy Act Representation. Applicants should submit the appropriate form based on the total budget proposed including cost share. *

8. Benefits Analysis Statement. Applicants shall be required to submit a nonproprietary summary of the proposed project including a summary of the energy, economic, and environmental benefits of the proposed research. This summary shall be suitable for public release and, when printed, will produce no more than two 8.5" X 11" sheets with 1" margins at top, bottom, and both sides, with print being no smaller than 12 point font.

* Forms indicated are available for download at the DOE grants web site: http://www.id.doe.gov/doeid/psd/application.html.

Volume II Technical

1. Proprietary Application Information. The applicant shall provide the legend contained in the section entitled General Conditions, Item b., on the application face page and on each page of the application to indicate proprietary information.

2. Table of Contents, listing the major sections, subsections, and appendices, as appropriate, of the technical application.

3. Project Description. The project description is limited to 25 pages, which, when printed, will produce no more than 25 8.5" X 11" sheets with 1" margins at top, bottom, and both sides, with print being no smaller than 12 point font and contains the following specific information:

A. Introduction

B. Project concept, goals, and objectives

C. Proposed R&D program described in detail

D. Rationale for proposed R&D program and why it is appropriate for DOE to pursue this effort

E. Why domestic industry is not already investigating or implementing the proposed concept. Why is Federal assistance required?

F. Technical feasibility and performance targets

G. Hurdles to be overcome by the proposed R&D

H. Domestic and worldwide technology status including emerging technologies (emphasize promising new developments)

I. Economic, environment, and energy benefit of the proposed program

J. Assumptions and detailed calculations of energy savings and environmental benefits of the proposed R&D

K. Milestone plan

L. Commercialization path - Identify the path that will be used by the project team to transfer the technology to the end-user at the earliest practicable time.

Include current and potential partnering strategies, follow-on development phases, licensing strategies, and a discussion of potential barriers and how the barriers will be overcome.

M. Justification for and description of needed facilities and estimated costs.

N. National Laboratory Capabilities - DOE National Laboratories are not eligible to respond directly to this SFAA; however, applicants are encouraged to team with DOE National Laboratories to take advantage of the expertise and facilities. Applicants can identify certain portions of their program to be performed at a DOE National Laboratory and funding can be sent from DOE directly to the laboratory. Proprietary work performed at the National Laboratories in conjunction with this agreement will also require cost sharing. Technical direction for laboratory project activities will be provided by the awardee, and proprietary information will be protected.

Volume III Cost/Price

1. SF-424A, Budget Information. A budget period is an interval of time (usually 12 months) into which the project period is divided for funding and reporting purposes. Project period means the total approved period of time that DOE will provide support contingent upon satisfactory progress and availability of funds. The project period may be divided into several budget periods. The project period shall not exceed five years. Each application must contain Standard Forms 424A. The application should contain full details of the costs regarding labor, overhead, material, travel, subcontracts, consultants, and other support costs broken down by task and by year. The cost application should have sufficient detail that an independent evaluation of the labor, materials, equipment and other costs as well as a verification of the proposed cost share can be performed. Every cost item should be justifiable and further details of the costs may be required if the application is selected for award. It is essential that requested details be submitted in a timely manner for the actual award. Items of needed equipment should be individually listed by description and estimated cost inclusive of tax, and adequately justified. The destination and purpose of budgeted travel and its relation to the research should be specified. Anticipated consultant services should be justified and information furnished on each individual's expertise, primary organizational affiliation, daily compensation rate, and number of days of expected service. Consultant's travel costs should be listed separately under travel in the budget. ***

2. Spending plan by task, phase, and year.

3. Sources of, and expectations concerning cost share and financing.

*** Forms indicated are available for download at http://fillform.gsa.gov/

Volume IV Business Management

1. Organizational Plan - Identify all project participants. Discuss the role of each participant.

2. Key personnel and responsibilities. Include a two-page resume of each individual and evidence that each individual has agreed to accept the responsibilities assigned if an award is made. Each resume, when printed, will produce no more than two 8.5" X 11" sheets with 1" margins at top, bottom, and both sides, with print being no smaller the 12-point font.

3. Specialized Experience.

4. Related Experience.

5. Project organization and responsibilities.

6. Task integration and project coordination.

7. Facilities and equipment available.

8. Project management structure including implementation and monitoring of R&D.

9. Management philosophy.

10. Reporting.

F. TIME, DATE, AND PLACE PREAPPLICATIONS/APPLICATIONS ARE DUE:

(a) Applications must be received NO LATER THAN 3:00 P.M. local prevailing time on August 26, 2002.

(b) All applicants shall submit one (1) signed original and two copies of the application to the address indicated in the ADDRESS section of this solicitation. Applicants assume the full responsibility of ensuring that the documents are received at the designated address by the date and time specified above. Such applications shall be closed and sealed and clearly identified by the solicitation number on the outside

of the package.

(c) Neither e-mail nor facsimile applications shall be accepted. All solicitation specific questions should be submitted in writing no later than July 24, 2002, or by e-mail at edunne@doeal.gov.

G. QUALIFICATION/ELIGIBILITY CRITERIA:

For-profit and not-for-profit organizations, state and local governments, Indian tribes, and institutions of higher learning are eligible for cooperative agreement awards under this solicitation. Collaborations between industry, industry organizations, university and National Laboratory participants are encouraged. It is the desire of the DOE that the primary applicant be an industrial partner. National Laboratories may not compete with private industry as primary or subcontractor/sub-recipients under this solicitation. Those applications that include National Laboratories should include them only as collaborators and should clearly identify the unique capabilities, facilities, and/or expertise the Laboratory offers the primary applicant. National Laboratories will receive their funding through their existing arrangements with the Government.

Industry organizations that can organize multi-company consortiums, ideally consisting of at least suppliers, end users, and commercialization partners are strongly encouraged to submit applications.

H. APPLICATION EVALUATION:

a. General Evaluation Procedures: Only those applications that meet all requirements of this solicitation will be considered for award. Applicants will be evaluated in accordance with the evaluation criteria set forth below. All applications will be screened initially by DOE to ensure that they meet the qualification criteria and the eligibility criteria in this solicitation. Those applications judged to be so inadequate that an evaluation is not warranted will be rejected and the applicant will be notified that the application will not be evaluated. DOE may reject an application that: (1) is not signed by an official authorized to bind the applicant; or (2) omits any information or documentation required by statute, program rule, or the solicitation, if the nature of the omission precludes review of the application. During the review of a complete application, DOE may request submission of additional information only if the information is essential to evaluate the application.

Merit Reviews: All applications shall be evaluated under the procedure for "Objective Merit Review of Discretionary Financial Assistance Applications" which was published in the Federal Register on May 31, 1990 (Vol. 55, No. 105). Applicants who fail to cooperate fully and in a timely manner during negotiations

may be eliminated from further consideration for awards.

The applications will be evaluated in accordance with the Office of Energy Efficiency and Renewable Energy Merit Review Procedure, and the criteria and programmatic considerations set forth in this solicitation. In conducting this evaluation, the Government may utilize assistance and advice from non-Government personnel. Applicants are therefore requested to state on the cover sheet of the applications if they do not consent to an evaluation by such non-Government personnel. The applicants are further advised that DOE may be unable to give full consideration to an application submitted without such consent.

b. Evaluation Criteria: Applications will be evaluated and point-scored in accordance with the following criteria. The application should be fully responsive to each of the criteria.

Weighting of Criteria: The evaluation criteria are weighted in the following manner: The criteria shall be based on a maximum of 100 points. Criterion 1 is worth a maximum of 10 points. Criterion 2 is worth a maximum of 25 points. Criterion 3 is worth a maximum of 25 points. Criterion 4 is worth a maximum value of 40 points.

Criterion 1: Applicant/Team Capabilities and Facilities - Capabilities and facilities shall be evaluated considering: a) ability to assemble a multi-disciplined team with research experience and qualifications in the application subject area; b) knowledge of past advanced developments in the work proposed; c) the availability of equipment, laboratory and demonstration facilities, analytic support and other necessary resources for performing the work proposed; d) project management methods and e) at least 15 percent of the research and development must be conducted by the proposer.

Criterion 2: Research Concept and Plan - The technical potential of the application shall be evaluated considering: a) the responsiveness of the application to research priorities identified in the Heavy Vehicle Technologies program; b) the clarity, completeness, and adequacy of the statement of objectives (including a review of supporting data obtained in laboratory and/or pilot scale work completed to date); c) the technical merit and feasibility of the proposed work (i.e., is it based on sound scientific/engineering principles and on an understanding of current state of the art in the heavy vehicle industry); and d) the adequacy and appropriateness of the schedule (sequence of project tasks, planned levels of data acquisition, sampling and analyses, principal milestones, decision points, and time for each task) and the planned assignment of responsibilities and level of manpower to complete the research.

Criterion 3: - Industrial involvement shall be evaluated considering: a) participation by the truck industry, a supplier to the truck industry or an end-user industry in preparation of the application and in performing the research activities; and b) identification of, and commitment to, a viable mechanism, plan, or path to transfer the technology to industry at the earliest practicable time.

Criterion 4: Economic, Energy, and Environmental Benefits - Benefits shall be evaluated considering: a) general applicability, timeliness, and economic viability of the proposed technology (i.e., probability of commercial application); b) potential for enhancing the economic competitiveness of the domestic truck industry; c) potential for reducing the energy consumption of the domestic truck industry and/or suppliers and end-users; and d) potential for reducing the environmental impacts of the domestic truck industry and/or suppliers and end-users.

c. Program Policy Factors: In conjunction with the evaluation results and rankings of individual applications, the Government shall make selections for negotiations and planned awards from among the highest ranking applications, using the following programmatic considerations.

1. Applications must address one of the research topics of this solicitation and should potentially benefit a broad cross-section of the truck industry.

2. The total proposed cost of the project will not be point scored. Applicants are advised, however, that not withstanding the lower relative importance of the cost considerations, the evaluated cost may be the basis for the selection. In making the selection decision, the apparent advantages of individual technical and business application approaches (excluding cost considerations) are worth the probable cost differences.

3. Applications requiring DOE funding levels that exceed the anticipated amount of federal funds available for this program shall not be viewed favorably and shall probably not be eligible for award.

4. It is desirable to implement each research and development project as a continuing collaborative effort in which the recipients represent both the scientific/engineering research disciplines as well as members of the heavy vehicle and end-use industry. Collaborations between industry, university, and National Laboratory participants are encouraged. Partnerships between heavy vehicle industries and their supplier and end-user industries are also encouraged, as are partnerships between hybrid propulsion system developers and heavy vehicle manufacturers.

5. Applications that have the potential to save significant energy, reduce negative environmental impacts, and provide significant cost benefits are preferred. Applications that offer significant reductions in greenhouse gas emissions (carbon, perfluorocarbons) are particularly encouraged. (Applicants may access an overview and analysis of industrial technologies and measures to limit and reduce greenhouse gas emissions at the following Internet site: http://www.gcrio.org/online.html. The site features, under 1997, a report entitled: "Technologies, Policies and Measures for Mitigating Climate Change: IPCC Technical Paper I," prepared by the Intergovernmental Panel on Climate Change.)

6. Applications that offer particularly innovative, technically feasible approaches to significantly improve the energy efficiency and/or environmental performance of the heavy vehicle industry are encouraged.

7. Programmatic goals include the desire for a portfolio of research projects balanced with respect to sector (i.e., primary, semi-fabricated, and finished product), long-term vs. short-term market penetration horizons, and short duration vs. long duration projects.

I. GENERAL CONDITIONS:

a. Awards: Awards made as a result of this solicitation shall be subject to the DOE Financial Assistance rules at 10 CFR Part 600. DOE reserves the right to support, or not to support, all, or any part of any application. All applicants will be notified in writing of the action taken on their applications in approximately 90 days after the closing date for this solicitation, provided no follow-up clarifications are needed. Status of any application during the evaluation and selection process will not be discussed with the applicants. Unsuccessful applications will not be returned.

b. Proprietary Application Information: Applications submitted in response to this solicitation may contain trade secrets and/or privileged or confidential commercial or financial information which the applicant does not want used or disclosed for any purpose other than evaluation of the application. The use and disclosure of such data may be restricted, provided the applicant marks the cover sheet of the application with the following legend and specifies the pages of the application which are to be restricted in accordance with the conditions of the legend: "The data contained in pages ____ of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent

provided in the award. This restriction does not limit the Government's right to use or disclose data obtained without restriction from any source, including the applicant."

Further, to protect such data, each page containing such data shall be specifically identified and marked, including each line or paragraph containing the data to be protected with a legend similar to the following:

"Use or disclosure of the data set forth above is subject to the restriction on the cover page of this application."

It should be noted, however, that data bearing the aforementioned legend may be subject to release under the provisions of the Freedom of Information Act (FOIA), if DOE or a court determines that the material so marked is not exempt under the FOIA. The Government assumes no liability for disclosure or use of unmarked data and may use or disclose such data for any purpose. Applicants are hereby notified that DOE intends to make all applications submitted available to non-Government personnel for the sole purpose of assisting the DOE in its evaluation of the applications. These individuals will be required to protect the confidentiality of any specifically identified information obtained as a result of their participation in the evaluation.

J. NOTICES TO APPLICANTS

a. False Statements: Applications must set forth full, accurate, and complete information as required by this solicitation. The penalty for making false statements is prescribed in 18 U.S.C. 1001.

b. Application Clarification: DOE reserves the right to require applications to be clarified or supplemented to the extent considered necessary either through additional written submissions or oral presentations.

c. Amendments: Any amendments to this solicitation will be issued on the Internet site that contains this solicitation.

d. Applicant's Past Performance: DOE reserves the right to solicit from available sources relevant information concerning an applicant's past performance and may consider such information in its evaluation.

e. Commitment of Public Funds: The Contracting Officer is the only individual who can legally commit the Government to the expenditure of public funds in connection with the proposed award. Any other commitment, either explicit or implied, is invalid.

f. Effective Period of Application: All applications should remain in effect for at least 180 days from the closing date.

g. Availability of Funds: The actual amount of funds to be obligated in each fiscal year will be subject to availability of funds appropriated by Congress. DOE reserves the right to fund in whole or in part, any, all or none of the applications submitted in response to this solicitation.

h. Assurances and Certifications: DOE requires the submission of pre-award assurances of compliance and certifications that are mandated by law. These forms are located at the Internet site referenced on page 10 of this solicitation under the "Application Instructions" section. These should be completed and provided with the application.

i. Questions and Answers: Questions regarding this solicitation must be submitted in writing to the DOE Contract Specialist and should be submitted no later than July 24, 2002. Questions may be sent via fax or by email. Questions and answers shall be issued in writing on the Internet site which contains this solicitation.

j. Pre-award costs: The government is not liable for any costs incurred in preparation of an application. Awardees may incur pre-award costs up to ninety (90) days prior to the effective date of award. Should the awardee take such action, it is done so at the awardee's risk and does not impose any obligation on the DOE to issue an award (10 CFR 600.125).

k. Patents, Data, and Copyrights: Applicants are advised that patents, data, and copyrights will be treated in accordance with 10 CFR 600.27.

l. Environmental Impact: Award will not be made until any and all environmental requirements are completed.

m. DOE Minority Economic Impact Loan: DOE Minority Economic Impact loans are not available for this solicitation.

n. Buy American Requirements: Congress may, through appropriations legislation, require applicants to comply with sections 2 through 4 of the Act of March 3, 1933 (41 U.S.C. l0a-10c, popularly known as the 'Buy American Act'). Proposers are advised that they should be prepared to comply with this requirement.

o. Simpson-Craig Amendment: Applicant organizations which are described in section 501(c)(4) of the Internal Revenue Code of 1986 and engage in lobbying

activities after December 31, 1995, shall not be eligible for the receipt of federal funds constituting an award, grant, or loan.

p. Regulatory Information: Review under Executive Order 12372, “Intergovernmental Review of Federal Programs” is not required.